

March 2, 2004

MEMORANDUM TO: Glenn M. Tracy, Director
Division of Nuclear Security, NSIR

FROM: Garmon West, Acting Chief **/RA/**
Licensee Personal Security Section
Division of Nuclear Security, NSIR

SUBJECT: SUMMARY OF THE FEBRUARY 26, 2004, SECOND PUBLIC MEETING TO DISCUSS A DRAFT ORDER REGARDING FATIGUE OF NUCLEAR FACILITY SECURITY FORCE PERSONNEL AT DECOMMISSIONED REACTORS AND INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS (ADAMS ACCESSION NUMBER ML040610540)

On February 26, 2004, the U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting at NRC Headquarters with representatives of the Nuclear Energy Institute (NEI) and utility stakeholders. The purpose of this meeting was to discuss the draft order the NRC intends to issue concerning fatigue of security force personnel at decommissioned reactors and independent spent fuel storage installations (ISFSIs) related to matters outlined in the meeting agenda (Attachment 1). Attachment 2 lists the attendees at the February 26, 2004, meeting.

The meeting focused on the draft order language (Attachments 3 and 4) and the major issues raised by the industry were:

1. Some licensees have a small administrative staff and only one security shift supervisor per shift. If the security shift supervisor for the upcoming shift is unable to come to work, the previous security shift supervisor must stay over to authorize any deviation from the individual work hour limits and the break between work periods; the licensees feel that this is an administrative burden, to only allow the security shift supervisor to authorize a deviation from the individual work-hour limits and the break between work periods. These licensees would like additional personnel to be given the authority to allow deviations from the individual work-hour limits and the break between work periods.
2. Some ISFSIs are not physically co-located with a power reactor, but are located a short distance away from the site of a power reactor and are operated by that power reactor; these facilities would like the compensatory measures (CMs) to recognize that they are located near the power reactor site to allow them to implement the fatigue Order for power reactors using a uniform set of requirements between the ISFSI and power reactor.
3. Some licensees have a small administrative staff and feel that it is an administrative burden to document self-declarations of being unfit for duty due to fatigue and to describe the process to be followed if this condition exists as required in the procedure section of the CMs; the licensees recommend deleting these sections.

4. Some licensees do not have a fitness-for-duty (FFD) program in place and implementing a program that manages fatigue could be costly for these licensees. This comment applies to the granting of a deviation from the individual work-hour controls which requires an evaluation by individuals with training, in the symptoms, contributing factors, and effects of fatigue, that determined the individual's FFD would not be adversely affected by the additional work period. The staff discussed with the licensees some options on implementing fatigue training and notes that it is not asking these licensees to implement a behavior observation program or FFD program identical to power reactors.
5. A new simplified option (individual total work-hour controls method) was introduced to allow licensees to calculate security work force hours, instead of utilizing the current group work-hour controls averaging method, to reduce a potential unnecessary regulatory burden. Additionally, the licensee will be required to state within its procedures, which option it shall use to determine security force work hours. The licensees agreed with the changes, in principle, as well as language that discussed unplanned security outages and increased threat conditions while using this option.
6. Some licensees requested that the section that discusses planned security outages and allows the group work-hour average to be limited to 60-hours per week include planned evolutions such as fuel movement. These evolutions were described as infrequent.

The attached documents were made available and discussed with the meeting attendees.

- Attachments:
1. Agenda
 2. List of Attendees
 3. Draft Order and Compensatory Measures on Worker Fatigue at Independent Spent Fuel Storage Installations
 4. Draft Order and Compensatory Measures on Worker Fatigue at Decommissioned Reactors

CONTACT: Alex Sapountzis, NSIR/DNS
301-415-7822

4. Some licensees do not have a fitness-for-duty (FFD) program in place and implementing a program that manages fatigue could be costly for these licensees. This comment applies to the granting of a deviation from the individual work-hour controls which requires an evaluation by individuals with training, in the symptoms, contributing factors, and effects of fatigue, that determined the individual's FFD would not be adversely affected by the additional work period. The staff discussed with the licensees some options on implementing fatigue training and notes that it is not asking these licensees to implement a behavior observation program or FFD program identical to power reactors.

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6. Some licensees requested that the section that discusses planned security outages and allows the group work-hour average to be limited to 60-hours per week include planned evolutions such as fuel movement. These evolutions were described as infrequent.

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CONTACT: Alex Sapountzis, NSIR/DNS
301-415-7822

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ADAMS Accession No. ML040610540

* see previous concurrence

OFFICE	LPSS/DNS	E	LPSS/DNS	E
NAME	A. Sapountzis*		G. West*	
DATE	3/2/04		3/2/04	

"C" = Copy without enclosures "E" = Copy with enclosures "N" = No copy
OFFICIAL RECORD COPY

AGENDA

MEETING WITH STAKEHOLDERS TO DISCUSS A DRAFT ORDER CONCERNING WORKER FATIGUE AT DECOMMISSIONING REACTOR FACILITIES AND INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS

FEBRUARY 26, 2004

- 8:30 A.M.-9:00 A.M. REGISTRATION TWO WHITE FLINT NORTH (ROOM T9-A1)
(ADAMS ACCESSION NUMBER ML040260015)
- 9:00 A.M.-9:15 A.M. INTRODUCTIONS AND OPENING REMARKS
- Purpose, need and objectives for the meeting.
 - Format and procedures for participation in the meeting.
- 9:15 A.M.-9:30 A.M. BACKGROUND
- Summation of first meeting.
 - Comments and questions. (Stakeholders)
- 9:30 A.M.-10:30 A.M. PRESENTATION OF DRAFT ORDER, COMPENSATORY
MEASURES FOR FATIGUE WITH REVISIONS
- Background/scope (Sections A and B) of personnel covered by
the draft fatigue Order.
 - Individual work-hour controls covered by the draft fatigue Order
(Section C.1).
 - Comments and questions. (Stakeholders)
- 10:30 A.M.-10:45 A.M. BREAK
- 10:45 A.M.-11:30 A.M. CONTINUATION...PRESENTATION OF DRAFT ORDER,
COMPENSATORY MEASURES FOR FATIGUE WITH REVISIONS
- Group work-hour controls covered by the draft fatigue Order
(Section C.2).
 - Licensee exemptions during declared emergencies covered by
the draft fatigue Order (Section C.3).
 - Procedures covered by the draft fatigue Order (Section C.4).
 - Comments and questions. (Stakeholders)
- 11:30 P.M.-12:00 P.M. CLOSING REMARKS BY NRC
- Summation of major topics.
 - Next steps.
 - Comments and questions. (Stakeholders)

ATTENDANCE LIST

Meeting with stakeholders to discuss draft Fatigue Order with Decommissioned Reactors and Independent Spent Fuel Storage Installations

On February 26, 2003, the following individuals attended the open meeting held in room T9-A1 of the Two White Flint Building, Rockville, Maryland.

Name	Organization	Telephone/E-mail
Zane Easley	Pacific Gas & Electric	707-444-0710 zze1@pge.com
Esteban Nava	SMUD/Rancho Seco	916-732-5913 enava@smud.org
Bob Jones	SMUD/Rancho Seco	916-732-4843 rjones2@smud.org
Mark Gardner	DOE-Idaho	208-526-5655 gardnemd@id.doe.gov
Michael Van Alst	Consumer Energy Big Rock Point	231-547-8204 mevanalst@cmsenergy.com
Adam Levin	Exelon Generation	630-657-2193 adam.levin@exeloncorp.com
Sandie Garvie	Yankee Atomic	413-424-2241 sandiegarvie@framatome_corp.com
Robert Evans	Nuclear Energy Institute	202-739-8101 rce@nei.org
Jim Davis	Nuclear Energy Institute	202-739-8105 jwd@nei.org
Alex Sapountzis	NRC/NSIR	301-415-7822 aps@nrc.gov
Jay Persensky	NRC/RES	301-415-6759 jjp2@nrc.gov
Garmon West, Jr.	NRC/NSIR	301-415-0211 gxw@nrc.gov
David Desaulniers	NRC/NRR	301-415-1043 drd@nrc.gov
Tony DiPalo	NRC/NMSS	301-415-6191 ajd@nrc.gov

ATTENDANCE LIST

Meeting with stakeholders to discuss draft Fatigue Order with Decommissioned Reactors and Independent Spent Fuel Storage Installations

On February 26, 2003, the following individuals attended the open meeting held in room T9-A1 of the Two White Flint Building, Rockville, Maryland.

Name	Organization	Telephone/E-mail
Tom Williamson	Maine Yankee	207-882-4530 williamt@myapc.com
Jim Lenois	CYAPCO	860-267-3515 lenois@cyapco.com
Mary Ross-Lee	NRC/NMSS	301-415-3781 mjr2@nrc.gov
John Hickman	NRC/NMSS	301-415-3017 jbh@nrc.gov
Wayne Trump	Exelon Nuclear	717-456-4915 wayne.trump@exeloncorp.com
Marty Moe	Dairyland Power Coop	608-689-4203 mgm@dairy.net.com
Ray Landrum	Exelon Zion Station	847-746-2084 ext 2200 raymond.landrum@exeloncorp.com

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
) Docket Nos. (as shown in Attachment 1)
ALL INDEPENDENT SPENT FUEL STORAGE) License No. (as shown in Attachment 1)
INSTALLATION LICENSEES) EA-03-XXX

**ORDER MODIFYING LICENSES
(EFFECTIVE IMMEDIATELY)**

I.

The licensees identified in Attachment 1 to this Order hold licenses issued by the U.S. Nuclear Regulatory Commission (NRC or Commission) authorizing the operation of Independent Spent Fuel Storage Installation (ISFSI) facilities in accordance with the Atomic Energy Act of 1954 and Title 10 of the *Code of Federal Regulations* (10 CFR) Parts 50 and 72. Commission regulations at 10 CFR 72.184 and 72.212 require these licensees to comply with physical security in accordance with 10 CFR Part 73. This Order is being issued to all licensees who currently store spent fuel or have identified near term plans to store spent fuel in an ISFSI.

II.

On September 11, 2001, terrorists simultaneously attacked targets in New York, NY, and Washington, DC, utilizing large commercial aircraft as weapons. In response to the attacks and intelligence information subsequently obtained, the Commission issued a number of Safeguards and Threat Advisories to its licensees in order to strengthen licensees' capabilities and readiness to respond to a potential attack on a nuclear facility. On October 16, 2002, the Commission issued Orders to the licensees of independent spent fuel storage installations to put the actions taken in response to the Advisories in the established regulatory framework and to implement additional security enhancements which emerged from the NRC's ongoing

comprehensive review. The Commission has also communicated with other Federal, State, local government agencies, and industry representatives to discuss and evaluate the current threat environment in order to assess the adequacy of security measures at licensed facilities. In addition, the Commission has been conducting a comprehensive review of its safeguards and security programs and requirements.

Work hour demands on security force personnel have increased substantially since the September 11, 2001, attacks, and the current threat environment continues to require heightened security measures. The Commission has determined that the security measures addressed by the enclosed compensatory measures are required to be implemented by licensees as prudent measures to address issues that may arise from work-hour related fatigue of nuclear security force personnel. Therefore, the Commission is imposing requirements, as set forth in Attachment 2 of this Order, on all licensees of these facilities. These requirements, which supplement existing regulatory requirements, will provide the Commission with reasonable assurance that the public health and safety and common defense and security continue to be adequately protected. These requirements will remain in effect until the Commission determines otherwise.

In order to provide assurance that licensees are implementing prudent measures to achieve a consistent level of protection, all licenses identified in Attachment 1 to this Order shall be modified to include the requirements identified in Attachment 2 to this Order. In addition, pursuant to 10 CFR 2.202, the NRC finds that in the circumstances described above, the public health, safety, and interest require that this Order be immediately effective.

III.

Accordingly, pursuant to Sections 53, 103, 104, 161b, 161i, 161o, 182 and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 2.202 and 10 CFR Parts 50, 72 and 73, IT IS HEREBY ORDERED, **EFFECTIVE IMMEDIATELY**, THAT ALL LICENSES IDENTIFIED IN ATTACHMENT 1 OF THIS ORDER ARE MODIFIED AS FOLLOWS:

- A. All licensees shall, notwithstanding the provisions of any Commission regulation or license to the contrary, comply with the requirements described in Attachment 2 to this Order except to the extent that a more stringent requirement is set forth in the licensees' security plans. The licensees shall immediately start implementation of the requirements in Attachment 2 to the Order and shall complete implementation **no later than [insert date 180 days from the date of issuance]**.
- B. 1. All licensees shall, within **twenty (20) days** of the date of this Order, notify the Commission: (1) if they are unable to comply with any of the requirements described in Attachment 2, (2) if compliance with any of the requirements is unnecessary in their specific circumstances, or (3) if implementation of any of the requirements would cause the licensee to be in violation of the provisions of any Commission regulation or the facility license. The notification shall provide the licensee's justification for seeking relief from or variation of any specific requirement.
2. Any licensee that considers that implementation of any of the requirements described in Attachment 2 to this Order would adversely impact safe operation of the facility, the licensee must notify the Commission, within **twenty (20) days** of this Order, of the adverse safety impact, the basis for its determination that the requirement has an adverse safety impact, and either a proposal for achieving

the same objectives specified in the Attachment 2 requirement in question, or a schedule for modifying the facility to address the adverse safety condition. If neither approach is appropriate, the licensee must supplement its response to Condition B.1 of this Order to identify the condition as a requirement with which it cannot comply, with attendant justifications as required in Condition B.1.

- C. 1. All licensees shall, within **twenty (20) days** of the date of this Order, submit to the Commission, a schedule for achieving compliance with each requirement described in Attachment 2.
- 2. All licensees shall report to the Commission when they have achieved full compliance with the requirements described in Attachment 2.
- D. Notwithstanding the provisions of 10 CFR 72.186, all measures implemented or actions taken in response to this Order shall be maintained until the Commission determines otherwise.

Licensees' responses to Conditions B.1, B.2, C.1, and C.2, above, shall be submitted in accordance with 10 CFR 72.4. In addition, licensees' submittals that contain Safeguards Information shall be properly marked and handled in accordance with 10 CFR 73.21.

The Director, Office of Nuclear Material Safety & Safeguards, may, by letter, relax or rescind any of the above conditions upon demonstration by the licensee of good cause.

IV.

In accordance with 10 CFR 2.202, the licensee must, and any other person adversely affected by this Order may, submit an answer to this Order, and may request a hearing on this Order, within twenty (20) days of the date of this Order. Where good cause is shown, consideration will be given to extending the time to request a hearing. A request for extension of time in which to submit an answer or request a hearing must be made in writing to the

Director, Office of Nuclear Material Safety & Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and include a statement of good cause for the extension. The answer may consent to this Order. Unless the answer consents to this Order, the answer shall, in writing and under oath or affirmation, specifically set forth the matters of fact and law on which the licensee or other person adversely affected relies and the reasons as to why the Order should not have been issued. Any answer or request for a hearing shall be submitted to the Secretary, Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, ATTN: Rulemakings and Adjudications Staff, Washington, DC 20555. Copies also shall be sent to the Director, Office of Nuclear Material Safety & Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555; to the Assistant General Counsel for Materials Litigation and Enforcement at the same address; to the Regional Administrator for NRC Region I, II, III, or IV, as appropriate for the specific facility; and to the licensee if the answer or hearing request is by a person other than the licensee. Because of possible disruptions in delivery of mail to United States Government offices, it is requested that answers and requests for a hearing be transmitted to the Secretary of the Commission either by means of facsimile transmission to 301-415-1101 or by e-mail to hearingdocket@nrc.gov and also to the Office of the General Counsel either by means of facsimile transmission to 301-415-3725 or by e-mail to OGCMailCenter@nrc.gov. If a person other than the licensee requests a hearing, that person shall set forth with particularity the manner in which the individual's interest is adversely affected by this Order and shall address the criteria set forth in 10 CFR 2.714(d).

If a hearing is requested by the licensee or a person whose interest is adversely affected, the Commission will issue an Order designating the time and place of any hearing. If a hearing is held, the issue to be considered at such hearing shall be whether this Order should be sustained.

Pursuant to 10 CFR 2.202(c)(2)(i), the licensee may, in addition to demanding a hearing, at the time the answer is filed or sooner, move the presiding officer to set aside the immediate effectiveness of the Order on the ground that the Order, including the need for immediate effectiveness, is not based on adequate evidence but on mere suspicion, unfounded allegations, or error.

In the absence of any request for hearing, or written approval of an extension of time in which to request a hearing, the provisions specified in Section III above shall be final twenty (20) days from the date of this Order without further order or proceedings. If an extension of time for requesting a hearing has been approved, the provisions specified in Section III shall be final when the extension expires if a hearing request has not been received. AN ANSWER OR A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE EFFECTIVENESS OF THIS ORDER.

FOR THE NUCLEAR REGULATORY COMMISSION

Martin J. Virgilio, Director
Office of Nuclear Material Safety & Safeguards

Dated this day of

Attachments: 1. Addressee List (Not Included)
2. Compensatory Measures

Compensatory Measures

A. Background:

These compensatory measures (CMs) are established to delineate licensee responsibility in response to the threat environment presently in existence in the aftermath of the events of September 11, 2001. Excessive work schedules can challenge the ability of security force personnel to remain vigilant and effectively perform their duties.

B. Scope:

1. Independent Spent Fuel Storage Installation (ISFSI) facilities shall comply with the following CMs to ensure, in part, that security force personnel are not assigned to duty while in a fatigued condition that could reduce their alertness or ability to perform functions necessary to identify and promptly respond to security threats. Work hour controls shall apply to personnel performing the following functions: armed member of the security force, security alarm station operator(s), guard, security shift supervisor, watchperson (i.e., watchman), and any member of the security force that is responsible for executing the licensee's physical security plan.
2. ISFSI facilities located on the same site as an operating power reactor licensee may implement the Order for compensatory measures related to fitness-for-duty enhancement issued to power reactors on April 29, 2003, in place of this Order, to allow the implementation of a uniform set of requirements for the entire site.

C. Compensatory Measures:

1. Individual Work Hour Controls

(a) Personnel performing the functions identified in B:

(1) Shall not exceed the following limits, excluding shift turnover time:

- (i) 16 hours in any 24-hour period,
- (ii) 26 hours in any 48-hour period, and
- (iii) 72 hours in any 7-day period.

(2) Shall have a minimum 10-hour break between work periods. The participation in turnover is permitted during the break period.

(3) May be authorized, by the licensee, to deviate from the limits specified in C.1(a)(1) and/or C.1(a)(2) provided:

- (i) The licensee could not have reasonably foreseen or controlled the circumstance necessitating the deviation,
- (ii) The security shift supervisor has determined that the deviation is required to maintain the security for the facility,

(iii) An evaluation is performed, in advance, by individuals with training, as provided by the licensee, in the symptoms, contributing factors, and effects of fatigue that determined that the individual's fitness for duty would not be adversely affected by the additional work period to be authorized under the deviation, and

(iv) The basis and approval for C.1(a)(3) items (i), (ii), and (iii) are documented.

Note 1: An 8-hour break may be authorized as deviation from the 10-hour requirement of C.1(a)(2) if the deviation is required for a scheduled transition of crews between work schedules or shifts.

(4) Shall be limited to 700 hours quarterly and 2600 hours annually of actual hours worked or shall be subject to the Group Work Hour Controls of C.2.

(a) Unplanned Security Outage or An Increase in Threat Condition (i.e., increase in protective measures level as promulgated by NRC Advisory):

(1) There are no specific quarter and annual limits for this condition.

(2) For periods greater than 90 days, the licensee shall take prompt action to limit hours worked in accordance with the requirements of C.1(a)(4). The use of the allowance defined in C.1(a)(4)(a) shall not exceed 120 days.

Note 2: For the purposes of these CMs, the baseline threat condition is defined as the least significant threat condition in effect in the last 120 days.

Note 3: If an increase in threat condition occurs, the requirements of C.1(a)(4)(a) apply for the increased threat condition. If the threat condition returns to the baseline threat condition, the requirements of C.1(a)(4) apply.

Note 4: If multiple increases in threat condition occur while the conditions of C.1(a)(4)(a) are in effect, the requirements of C.1(a)(4)(a)(2) reset with each increase.

Note 5: If the threat condition decreases, the new threat condition shall be compared to the baseline to determine if the requirements of C.1(a)(4)(a) apply as a result of an increased threat condition. If so, C.1(a)(4)(a)(2) shall be referenced to the date when the current threat condition was last entered as the result of an increase.

Note 6: The licensees shall reference changes in threat condition prior to the issuance of these CMs to determine the baseline threat condition and whether the requirements of C.1(a)(4)(a) apply.

(b) The number and duration of approved deviations shall be reviewed by the

general manager and limited to the extent practicable.

(c) The licensee shall monitor and control individual work hours to ensure that excessive work hours are not compromising personnel alertness and performance.

2. Group Work Hour Controls

Group average work hours for personnel performing the functions identified in B shall be controlled in accordance with the following limits or shall be limited in accordance with the Individual Work Hour Controls of C.1(a)(4):

(a) Normal Conditions: The average number of hours actually worked by personnel performing the functions identified in B shall not exceed 48 hours per week, excluding shift turnover time, averaged over consecutive periods not to exceed six (6) weeks. Personnel who did not work at least 75 percent of the normally scheduled hours during the averaging period shall not be included when calculating the average. If the group average limit is exceeded, the licensee shall take prompt action to reduce the average hours worked in accordance with the compensatory measures and take actions to prevent recurrence.

(b) Planned Security System Outages:

(1) The average number of hours actually worked by personnel performing the functions identified in B shall not exceed 60 hours per week, excluding shift turnover time, averaged over consecutive periods not to exceed six (6) weeks. For planned abnormal security conditions whose duration is less than the averaging period, the limit would be 60 hours per week averaged over the duration of the condition. Personnel who did not work at least 75 percent of the normally scheduled hours during the averaging period shall not be included when calculating the average. If the group average limit is exceeded, the licensee shall take prompt action to reduce the average hours worked in accordance with this compensatory measures and take actions to prevent recurrence.

(2) The limit defined in C.2(b)(1) can be used for up to 90 days. For periods greater than 90 days, the licensee shall take prompt action to limit hours worked in accordance with the requirements of C.2(a). The use of the limits defined in C.2(b)(1) shall not exceed 120 days.

(c) Unplanned Security Outage or An Increase in Threat Condition (i.e., increase in protective measures level as promulgated by NRC Advisory):

(1) There are no specific group limits for this condition.

(2) For periods greater than 90 days, the licensee shall take prompt action to limit hours worked in accordance with the requirements of C.2(a). The use of the allowance defined in C.2(c)(1) shall not exceed 120 days.

Note 7: For the purposes of these CMs, the baseline threat condition is defined as the least significant threat condition in effect in the last 120 days.

Note 8: If an increase in threat condition occurs while the facility is in a planned security outage, the requirements of C.2(c) apply for the increased threat condition. If the threat condition returns to the baseline threat condition during the planned outage, the requirements of C.2(b) apply using the original licensee defined start date for the planned facility outage.

Note 9: If multiple increases in threat condition occur while the conditions of C.2(c) are in effect, the requirements of C.2(c)(2) reset with each increase.

Note 10: If the threat condition decreases, the new threat condition shall be compared to the baseline to determine if the requirements of C.2(c) apply as a result of an increased threat condition. If so, C.2(c)(2) shall be referenced to the date when the current threat condition was last entered as the result of an increase.

Note 11: The licensees shall reference changes in threat condition prior to the issuance of these CMs to determine the baseline threat condition and whether the requirements of C.2(c) apply.

3. Licensees shall be exempt from the requirements of C.1 and C.2 during declared emergencies as defined in the licensee's emergency plan.

4. Procedures

Develop or augment procedures, as necessary, for personnel within the scope of this CM to:

- (a) Describe the process for implementing the controls for hours worked specified in C.1, C.2, and C.3 of this CM. The procedure shall specify whether the work hours shall be limited in accordance with the Individual Work Hour Controls of C.1(a)(4) or the Group Work Hour Controls of C.2.

- (b) Describe the process to be followed if an individual reports prior to or during a duty period that he or she considers himself or herself unfit for duty due to fatigue.

- (c) Document self-declarations of unfit for duty due to fatigue, if upon completion of the licensee's evaluation, it is determined the individual should be returned to work without a break of at least 10 hours.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of

ALL DECOMMISSIONING REACTOR
LICENSEES

)
) Docket Nos. (as shown in Attachment 1)
) License No. (as shown in Attachment 1)
) EA-03-XXX

**ORDER MODIFYING LICENSES
(EFFECTIVE IMMEDIATELY)**

I.

The licensees identified in Attachment 1 to this Order hold licenses issued by the U.S. Nuclear Regulatory Commission (NRC or Commission) authorizing the decommissioning of nuclear power plants in accordance with the Atomic Energy Act of 1954 and Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50. Commission regulations at 10 CFR 50.54(p)(1) require these licensees to comply with physical security in accordance with 10 CFR Part 73.

II.

On September 11, 2001, terrorists simultaneously attacked targets in New York, NY, and Washington, DC, utilizing large commercial aircraft as weapons. In response to the attacks and intelligence information subsequently obtained, the Commission issued a number of Safeguards and Threat Advisories to its licensees in order to strengthen licensees' capabilities and readiness to respond to a potential attack on a nuclear facility. On May 23, 2002, the Commission issued Orders to the licensees of decommissioning power reactors to put the actions taken in response to the Advisories in the established regulatory framework and to implement additional security enhancements which emerged from the NRC's ongoing comprehensive review. The Commission has also communicated with other Federal, State, local government agencies, and industry representatives to discuss and evaluate the current threat environment in order to assess the adequacy of security measures at licensed facilities.

In addition, the Commission has been conducting a comprehensive review of its safeguards and security programs and requirements.

Work hour demands on security force personnel have increased substantially since the September 11, 2001, attacks, and the current threat environment continues to require heightened security measures. The Commission has determined that the security measures addressed by the enclosed compensatory measures are required to be implemented by licensees as prudent measures to address issues that may arise from work-hour related fatigue of nuclear security force personnel. Therefore, the Commission is imposing requirements, as set forth in Attachment 2 of this Order, on all licensees of these facilities. These requirements, which supplement existing regulatory requirements, will provide the Commission with reasonable assurance that the public health and safety and common defense and security continue to be adequately protected. These requirements will remain in effect until the Commission determines otherwise.

In order to provide assurance that licensees are implementing prudent measures to achieve a consistent level of protection, all licenses identified in Attachment 1 to this Order shall be modified to include the requirements identified in Attachment 2 to this Order. In addition, pursuant to 10 CFR 2.202, the NRC finds that in the circumstances described above, the public health, safety, and interest require that this Order be immediately effective.

III.

Accordingly, pursuant to Sections 103, 104, 161b, 161i, 161o, 182 and 186 of the Atomic Energy Act of 1954, as amended, and the Commission's regulations in 10 CFR 2.202 and 10 CFR Parts 50 and 73, IT IS HEREBY ORDERED, **EFFECTIVE IMMEDIATELY**,

THAT ALL LICENSES IDENTIFIED IN ATTACHMENT 1 OF THIS ORDER ARE MODIFIED AS FOLLOWS:

- A. All Licensees shall, notwithstanding the provisions of any Commission regulation or license to the contrary, comply with the requirements described in Attachment 2 to this Order except to the extent that a more stringent requirement is set forth in the licensees' security plans. The licensees shall immediately start implementation of the requirements in Attachment 2 to the Order and shall complete implementation **no later than [insert date 180 days from the date of issuance]**.
- B. 1. All licensees shall, within **twenty (20) days** of the date of this Order, notify the Commission: (1) if they are unable to comply with any of the requirements described in Attachment 2, (2) if compliance with any of the requirements is unnecessary in their specific circumstances, or (3) if implementation of any of the requirements would cause the licensee to be in violation of the provisions of any Commission regulation or the facility license. The notification shall provide the licensee's justification for seeking relief from or variation of any specific requirement.
2. Any licensee that considers that implementation of any of the requirements described in Attachment 2 to this Order would adversely impact safe operation of the facility, the licensee must notify the Commission, within **twenty (20) days** of this Order, of the adverse safety impact, the basis for its determination that the requirement has an adverse safety impact, and either a proposal for achieving the same objectives specified in the Attachment 2 requirement in question, or a schedule for modifying the facility to address the adverse safety condition. If neither approach is appropriate, the licensee must supplement its response to

Condition B.1 of this Order to identify the condition as a requirement with which it cannot comply, with attendant justifications as required in Condition B.1.

- C. 1. All licensees shall, within **twenty (20) days** of the date of this Order, submit to the Commission, a schedule for achieving compliance with each requirement described in Attachment 2.
2. All licensees shall report to the Commission when they have achieved full compliance with the requirements described in Attachment 2.
- D. Notwithstanding the provisions of 10 CFR 50.54(p), all measures implemented or actions taken in response to this Order shall be maintained until the Commission determines otherwise.

Licensees' responses to Conditions B.1, B.2, C.1, and C.2, above, shall be submitted in accordance with 10 CFR 50.4, as applicable. In addition, licensees' submittals that contain Safeguards Information shall be properly marked and handled in accordance with 10 CFR 73.21.

The Director, Office of Nuclear Reactor Regulations, may, by letter, relax or rescind any of the above conditions upon demonstration by the licensee of good cause.

IV.

In accordance with 10 CFR 2.202, the licensee must, and any other person adversely affected by this Order may, submit an answer to this Order, and may request a hearing on this Order, within twenty (20) days of the date of this Order. Where good cause is shown, consideration will be given to extending the time to request a hearing. A request for extension of time in which to submit an answer or request a hearing must be made in writing to the Director, Office of Nuclear Reactor Regulations, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and include a statement of good cause for the extension. The answer

may consent to this Order. Unless the answer consents to this Order, the answer shall, in writing and under oath or affirmation, specifically set forth the matters of fact and law on which the licensee or other person adversely affected relies and the reasons as to why the Order should not have been issued. Any answer or request for a hearing shall be submitted to the Secretary, Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, ATTN: Rulemakings and Adjudications Staff, Washington, DC 20555. Copies also shall be sent to the Director, Office of Nuclear Material Safety & Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555; to the Assistant General Counsel for Materials Litigation and Enforcement at the same address; to the Regional Administrator for NRC Region I, II, III, or IV, as appropriate for the specific facility; and to the licensee if the answer or hearing request is by a person other than the licensee. Because of possible disruptions in delivery of mail to United States Government offices, it is requested that answers and requests for a hearing be transmitted to the Secretary of the Commission either by means of facsimile transmission to 301-415-1101 or by e-mail to hearingdocket@nrc.gov and also to the Office of the General Counsel either by means of facsimile transmission to 301-415-3725 or by e-mail to OGCMailCenter@nrc.gov. If a person other than the licensee requests a hearing, that person shall set forth with particularity the manner in which the individual's interest is adversely affected by this Order and shall address the criteria set forth in 10 CFR 2.714(d).

If a hearing is requested by the licensee or a person whose interest is adversely affected, the Commission will issue an Order designating the time and place of any hearing. If a hearing is held, the issue to be considered at such hearing shall be whether this Order should be sustained.

Pursuant to 10 CFR 2.202(c)(2)(i), the licensee may, in addition to demanding a hearing, at the time the answer is filed or sooner, move the presiding officer to set aside the immediate effectiveness of the Order on the ground that the Order, including the need for

immediate effectiveness, is not based on adequate evidence but on mere suspicion, unfounded allegations, or error.

In the absence of any request for hearing, or written approval of an extension of time in which to request a hearing, the provisions specified in Section III above shall be final twenty (20) days from the date of this Order without further order or proceedings. If an extension of time for requesting a hearing has been approved, the provisions specified in Section III shall be final when the extension expires if a hearing request has not been received. AN ANSWER OR A REQUEST FOR HEARING SHALL NOT STAY THE IMMEDIATE EFFECTIVENESS OF THIS ORDER.

FOR THE NUCLEAR REGULATORY COMMISSION

Martin J. Virgilio, Director
Office of Nuclear Material Safety & Safeguards

Dated this day of

- Attachments: 1. Addressee List (Not Included)
2. Compensatory Measures

Compensatory Measures

A. Background:

These compensatory measures (CMs) are established to delineate licensee responsibility in response to the threat environment presently in existence in the aftermath of the events of September 11, 2001. Excessive work schedules can challenge the ability of security force personnel to remain vigilant and effectively perform their duties.

B. Scope:

3. Decommissioning reactor facilities shall comply with the following CMs to ensure, in part, that security force personnel are not assigned to duty while in a fatigued condition that could reduce their alertness or ability to perform functions necessary to identify and promptly respond to security threats. Work hour controls shall apply to personnel performing the following functions: armed member of the security force, central alarm station operator, guard, secondary alarm station operator, security shift supervisor, watchperson (i.e., watchman), and any member of the security force that is responsible for executing the licensee's physical security plan.
2. Decommissioning reactor facilities located on the same site as an operating power reactor licensee may implement the Order for compensatory measures related to fitness-for-duty enhancement issued to power reactors on April 29, 2003, in place of this Order, to allow the implementation of a uniform set of requirements for the entire site.

C. Compensatory Measures:

1. Individual Work Hour Controls

(a) Personnel performing the functions identified in B:

(1) Shall not exceed the following limits, excluding shift turnover time:

- (i) 16 hours in any 24-hour period,
- (ii) 26 hours in any 48-hour period, and
- (iii) 72 hours in any 7-day period.

(2) Shall have a minimum 10-hour break between work periods. The participation in turnover is permitted during the break period.

(3) May be authorized, by the licensee, to deviate from the limits specified in C.1(a)(1) and/or C.1(a)(2) provided:

- (i) The licensee could not have reasonably foreseen or controlled the circumstance necessitating the deviation,
- (ii) The security shift supervisor has determined that the deviation is required to maintain the security for the facility,

(iii) An evaluation is performed, in advance, by individuals with training, as provided by the licensee, in the symptoms, contributing factors, and effects of fatigue that determined that the individual's fitness for duty would not be adversely affected by the additional work period to be authorized under the deviation, and

(iv) The basis and approval for C.1(a)(3) items (i), (ii), and (iii) are documented.

Note 1: An 8-hour break may be authorized as deviation from the 10-hour requirement of C.1(a)(2) if the deviation is required for a scheduled transition of crews between work schedules or shifts.

(4) Shall be limited to 700 hours quarterly and 2600 hours annually of actual hours worked or shall be subject to the Group Work Hour Controls of C.2.

(a) Unplanned Security Outage or An Increase in Threat Condition (i.e., increase in protective measures level as promulgated by NRC Advisory):

(1) There are no specific quarter and annual limits for this condition.

(2) For periods greater than 90 days, the licensee shall take prompt action to limit hours worked in accordance with the requirements of C.1(a)(4). The use of the allowance defined in C.1(a)(4)(a) shall not exceed 120 days.

Note 2: For the purposes of these CMs, the baseline threat condition is defined as the least significant threat condition in effect in the last 120 days.

Note 3: If an increase in threat condition occurs, the requirements of C.1(a)(4)(a) apply for the increased threat condition. If the threat condition returns to the baseline threat condition, the requirements of C.1(a)(4) apply.

Note 4: If multiple increases in threat condition occur while the conditions of C.1(a)(4)(a) are in effect, the requirements of C.1(a)(4)(a)(2) reset with each increase.

Note 5: If the threat condition decreases, the new threat condition shall be compared to the baseline to determine if the requirements of C.1(a)(4)(a) apply as a result of an increased threat condition. If so, C.1(a)(4)(a)(2) shall be referenced to the date when the current threat condition was last entered as the result of an increase.

Note 6: The licensees shall reference changes in threat condition prior to the issuance of these CMs to determine the baseline threat condition and whether the requirements of C.1(a)(4)(a) apply.

(b) The number and duration of approved deviations shall be reviewed by the Security Manager and limited to the extent practicable.

(c) The licensee shall monitor and control individual work hours to ensure that excessive work hours are not compromising personnel alertness and performance.

2. Group Work Hour Controls:

Group average work hours for personnel performing the functions identified in B shall be controlled in accordance with the following limits or shall be limited in accordance with the Individual Work Hour Controls of C.1(a)(4):

(a) Normal Conditions: The average number of hours actually worked by personnel performing the functions identified in B shall not exceed 48 hours, excluding shift turnover time, per week averaged over consecutive periods not to exceed six (6) weeks. Personnel who did not work at least 75 percent of the normally scheduled hours during the averaging period shall not be included when calculating the average. If the group average limit is exceeded, the licensee shall take prompt action to reduce the average hours worked in accordance with the compensatory measures and take actions to prevent recurrence.

(b) Planned Security System Outages:

(1) The average number of hours actually worked by personnel performing the functions identified in B shall not exceed 60 hours per week, excluding shift turnover time, averaged over consecutive periods not to exceed six (6) weeks. For planned abnormal security conditions whose duration is less than the averaging period, the limit would be 60 hours per week averaged over the duration of the condition. Personnel who did not work at least 75 percent of the normally scheduled hours during the averaging period shall not be included when calculating the average. If the group average limit is exceeded, the licensee shall take prompt action to reduce the average hours worked in accordance with this compensatory measures and take actions to prevent recurrence.

(2) The limit defined in C.2(b)(1) can be used for up to 90 days. For periods greater than 90 days, the licensee shall take prompt action to limit hours worked in accordance with the requirements of C.2(a). The use of the limits defined in C.2(b)(1) shall not exceed 120 days.

(c) Unplanned Security Outage or An Increase in Threat Condition (i.e., increase in protective measures level as promulgated by NRC Advisory):

(1) There are no specific group limits for this condition.

(2) For periods greater than 90 days, the licensee shall take prompt action to limit hours worked in accordance with the requirements of C.2(a). The use of the allowance defined in C.2(c)(1) shall not exceed 120 days.

<p>Note 7: For the purposes of these CMs, the baseline threat condition is defined as the least significant threat condition in effect in the last 120 days.</p>
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Note 8: If an increase in threat condition occurs while the facility is in a planned security outage, the requirements of C.2(c) apply for the increased threat condition. If the threat condition returns to the baseline threat condition during the planned outage, the requirements of C.2(b) apply using the original licensee defined start date for the planned facility outage.

Note 9: If multiple increases in threat condition occur while the conditions of C.2(c) are in effect, the requirements of C.2(c)(2) reset with each increase.

Note 10: If the threat condition decreases, the new threat condition shall be compared to the baseline to determine if the requirements of C.2(c) apply as a result of an increased threat condition. If so, C.2(c)(2) shall be referenced to the date when the current threat condition was last entered as the result of an increase.

Note 11: The licensees shall reference changes in threat condition prior to the issuance of these CMs to determine the baseline threat condition and whether the requirements of C.2(c) apply.

3. Licensees shall be exempt from the requirements of C.1 and C.2 during declared emergencies as defined in the licensee's emergency plan.

4. Procedures

Develop or augment procedures, as necessary, for personnel within the scope of this CM to:

- (a) Describe the process for implementing the controls for hours worked specified in C.1, C.2, and C.3 of this CM. The procedure shall specify whether the work hours shall be limited in accordance with the Individual Work Hour Controls of C.1(a)(4) or the Group Work Hour Controls of C.2.

- (b) Describe the process to be followed if an individual reports prior to or during a duty period that he or she considers himself or herself unfit for duty due to fatigue.

- (c) Document self-declarations of unfit for duty due to fatigue, if upon completion of the licensee's evaluation, it is determined the individual should be returned to work without a break of at least 10 hours.